Innovative Middle School Science Teaching
Continuation & Training Proposal

Program Overview and strategies: Student fascination with science is universally high in early grades and begins to diminish in the sixth, seventh, and eighth grades. By the time students reach the sophomore year of high school, their interest in science is often diminished. It is possible that the type of curriculum offered, the method of science instruction, and lack of classroom resources are contributing causes for this loss of student interest in science. Arkansas' elementary schools have a prescribed science framework. Therefore, the classroom teacher and resources that enhance the effectiveness of the teacher are major influencers of student attitudes about science.

The traditional lecture approach employed in many classrooms is most often a poor technique for science instruction. While the lecture style of instruction covers the required curriculum, it does not stimulate a student's interest in science, especially in the Internet age. A better approach is teacher utilization of demonstrations in explaining a particular scientific principle. However, the approach that most enhances learning provides for students exploration in a "hands-on" learning environment.

However, reduced resource availability in middle schools is often the limiting factor in offering teachers and students the kind of hands-on learning experience that will promote student interest. In response to this problem, in 2002, the Arkansas Science & Technology Authority, with the assistance of the Winthrop Rockefeller Foundation, initiated two projects affecting the way in which middle school science is taught. The initial two-part science teaching improvement project included both a science inquiry-based Minigrant program as well as a project utilizing an innovative use of technology.

2002 Minigrant Program Description & Strategies. While scientific demonstration and student exploration are best for generating student interest, such activity requires a monetary investment. The amount does not always need to be large. Unfortunately, even minimal funds for science teaching supplies are often not available in Arkansas schools and teachers frequently use their own money to obtain the needed science items. The 2002 grant allowed a small investment of funds in teachers in these areas. Using these awards teachers were able to utilize multiple "hands-on" activities in the science classroom or in many cases create new activities developed for their specific science classroom needs. Over a three year period, the program funded 297 middle school teachers with $500 each per year to purchase supplies for science teaching activities. Teachers could reapply each year for a continuous period of up to three years.

2002 STUART Grant Description & Strategies. The second program provided funds for eInstruction systems for middle school classrooms, known as Science Teaching by Using Audience Technology or STUART. The electronic teaching systems provided the teachers with a laptop computer, software, and LCD projector, as well as individual infrared keypads for all classroom students. Using such a system, the teacher could keep students actively involved as topics were discussed. Each student taking part in a classroom equipped with this system had a keypad to record their response to questioning, and since the responses were displayed immediately, the teacher could easily identify and rectify any weaknesses in the class. The system could also be used to add value to teaching with creative imaging and projected science activities and games to increase student understanding. Annual evaluation reports indicated that the use of this technology improved student attention, participation, and learning. The cost of deployment to a single classroom ranged from $5000-$6000 (the total cost of the system has dropped over the three period through competitive bidding and component costs decreasing). A total of 36 systems have been established over the three year grant period.

The STUART program has a teacher professional development component. Effective utilization of such systems requires that teachers who are implementing this program in their classroom have both the professional training for maximizing eInstruction capabilities and hands-on practice using the system. Our

three year experience with this training has taught us that a more extensive two-day workshop retreat for teachers receiving this training is preferable. In 2004, the Authority initiated an overnight retreat style format for training teachers awarded this grant. By using this type of training format, teachers received expanded training that allowed practice time for assimilation of the new skills and development of confidence and self-assurance for creative utilization of equipment and software. This expanded type of format was reviewed by our outside evaluator and determined to be much more instructive and effective for teachers in this program. Evaluations by teachers taking part in the expanded training were also unanimously positive.

Expansion of Authority Mission through Middle School Grant Programs. It is the hope of the Authority that increased "hands-on" activities in the middle school science classroom will both improve science education and also increase the enrollment rate of students in advanced science and mathematics courses as school children progress to high school and hopefully continue to college. The ultimate goal is an increase in matriculation of students into colleges and universities with increases in student populations with advanced degrees in science, mathematics or technology which will in turn influence the general economic climate of Arkansas. A new component to this proposal in our renewal request is a mechanism to empower the community to influence this progression of events. The Authority wishes to facilitate at the local level, the development of skills and the management training to administer programs that can impact the community by promoting educational initiatives and stimulating economic growth. By working through Affiliates of the Arkansas Community Foundation, numerous communities around the state will develop skills that will permit expansion of strong community-based initiatives to strengthen school systems, improve the local economy, and enhance community spirit and pride.

Description of the Authority's goals and objectives and their relationship to the Winthrop Rockefeller Foundation's mission and program areas of concentration. The Arkansas Science & Technology Authority is publicly chartered with the statewide mission to bring the benefits of science and advanced technology to the people and state of Arkansas through scientific research, technology transfer and development, and business innovation. This mission is addressed by strategies to promote university funding for research, by supporting innovative technology and entrepreneurial development of knowledge-based companies, and by encouraging improvements in math, science and engineering education. The Authority's programs are described at Http://www.accessarkansasscience.org. This is compatible with the mission of the Winthrop Rockefeller Foundation to improve the lives of Arkansans by using its resources to build and sustain strong communities for all Arkansans and by supporting and strengthening organizations that serve them.

The focus on middle school science instruction of this particular proposal is in-line with WRF interest in promoting the quality of life for Arkansas communities through educational opportunities. Economic opportunity is inherently tied to an individual's educational experiences. Enhancing the educational opportunities of middle school science students can ultimately increase the number of Arkansas children who are capable of and interested in pursuing advanced science, mathematics, technology, and engineering degrees. Such a skilled workforce is necessary if Arkansas is to be a vibrant participant in the knowledge-based economy.

We recognize that not all students who attend middle schools pursue a college or university education. However, the principles acquired in science classrooms can be applied to many different career choices. Science literacy helps an individual to develop observation and problem solving skills, which persist a lifetime. The alternative, a substandard education, has wide reaching effects for Arkansans. An inadequate science and math background can restrict an individual's employment opportunities and can often relegate individuals to lower salaried jobs in a technological world. Strong mathematics, science, engineering and technology skills, therefore, become an economic development issue and have a strong impact on the future of the state.

Full description of the project and how it furthers the Authority's mission. The Authority recognizes that attempts must be made to improve the educational quality of the schools nurturing the children of Arkansas. One step toward the goal of high quality education is to transition the ability to influence the educational quality of the science classroom to the communities that support these schools. By **empowering the local community to administer the minigrant program**, community organizations are enabled through a collaborative approach to gain management skills which will impact many areas. Not only will they influence education in their local schools but the management skills they acquire could potentially lead to a mechanism for systemic change to improve the economy and other issues of importance within their sphere of influence.

To initiate the community-based focus, Affiliates of the Arkansas Community Foundation will be trained in the administration of the Minigrant Programs. Regional Math/Science Resource Centers (nonpolitical entities affiliated with the Arkansas Mathematics, Science and Technology Coalition) will serve as the central receiving point for minigrant applications and a critical partner of and advisor to the Affiliate during the evaluation process. Science Specialists in these Resource Centers will assist Affiliates in the review process during the evaluation of proposals in a two-tiered process. Upon receipt of applications, Mathematics and Science Education Centers will catalog all applications into the central database and will make the initial evaluation of all proposals. During the initial evaluation by the Resource Center staff, essentially all weak or inappropriate proposals will be removed from the review process; the science specialists will then work with Affiliates to determine which of the remaining proposals to fund. The specialist will work through the evaluation matrix with the affiliates to determine the rank order of funding and prioritizing the applications, especially when not enough funds are available to award to every applicant. Affiliates must have decision-making criteria in place and document all steps of the evaluation process. Affiliates also must have a written policy in place that addresses conflicts policy.

All school districts in the state are affiliated with one of the twelve regional centers which have the directive to assist all teachers in their geographic area to improve the science and math classroom education. (A state map showing the geographic boundaries and county service areas of these resource centers is included as an attachment.) These regional centers, which serve the twelve geographic regions of the state, will also assist in the administration and evaluation of STUART proposals with the assistance of the Authority. This shift of management of the STUART grants to the Math/Science Centers insures high quality and fair evaluation practices employing the collaborative efforts of both the Authority and Resource Center staff who are closer to the local school districts and pushes the focus of empowerment to the regional level. Regional Math/Science Centers are located within a 30 minute drive of most counties of the state. Additionally, staff and specialists of these regional centers are intimately familiar with the school needs within their service area.

Continuation of Minigrant Programs. This project proposes a continuation and expansion of the 2002 proposal. The Authority will continue in its effort to sustain the minigrant program for a five year period with the added responsibility of training Affiliate organizations of the Arkansas Community Foundation and the Math/Science Resource Centers in the administration of this program. The initial year will be an organizational year with the Authority managing the program in its entirety and working with the Arkansas Community Foundation for planning and giving information to Affiliates. During year one, the Authority staff will also host centralized workshops for Math/Science Resource Center staff to orient Center Directors, Science Specialist, and pertinent staff on all details involved in their future role of central receiving point, preliminary reviewer, and advisor to Affiliates. Also, during these workshops, evaluation of 2005 applications will occur and decisions for funding of the year one minigrants will occur with the assistance of the Resource Center staff. Later in year one, Science Specialist will again be convened to review and evaluate STUART applications.

During the ensuing three years (Years 2-4) the Affiliates will be trained in groups commensurate with the twelve geographical regions of the Math/Science Resource Centers. These training conferences will be held in the Math and Science Resource Centers within their geographic area. The function of these conferences will

be for working through the evaluation process for the second tier review of applications and the general administration process for managing the minigrant program (soliciting proposals, award notification, follow-up and reporting). Year 5 is a follow-up monitoring year with the Authority acting in an advisory capacity after total training is complete. The Authority will continue to administer the minigrant program over this five year period with the assistance of the Resource Centers for those school districts that do not fall within an Affiliate service zone. The final determination of the school districts that coincide with specific Affiliate zones will be defined with the help of ARCF during the early part of year one. It is anticipated that the growth of Affiliates will occur over this time period and that the number of counties without Affiliate organizations will be significantly reduced.

General administration of the program by an individual Affiliate is described in detail in the Arkansas Community Foundation Affiliates Science Minigrant Program Reference Guide for ARFC Affiliates developed by the Authority (attached in appendix). The focal point of the transition would entail working intensively with all Affiliates within a specified Resource Center area to insure quality management of the program, including such things as use of evaluation matrix for prioritizing applicants, documenting the steps of the review process, and efficient record keeping and reporting. During the three training years, four Resource Center areas would be selected with the assistance of ARCF and all Affiliates within that area would be trained. The training effort will entail insuring that multiple members of Affiliate staff have a firm understanding of and gain experience in Minigrant program administration, and that each Affiliate is comfortable working with and has experience in reviewing of pre-screened proposals with the guided assistance of the Science Specialist in the Centers (reference two-tiered review above). The general administrative work of the Affiliate staff will encompass recruitment of grant submission, record-keeping, proposal evaluation (with the Science Specialist), award administration, and annual reporting. The Authority will also work with ARCF staff and the Resource Center staff during the initial year to work out program details in the transition process to avoid potential pitfalls and to familiarize them with general program record-keeping procedures.

STUART Program.
The Authority will continue to administer the STUART program over the five year period but with a shift of administrative focus to the regional Math/Science Resource Centers. The Authority will work with the Resource Centers who again will serve as central receiving point for applications and assist in the evaluation process. The scope of this project will remain unchanged but with the goal of equipping twelve schools per year (one in each Math/Science Resource Center geographical region). The Authority will work with Resource Center staff to train them to function as regional group in handling selection process and doing periodic follow-up with school receiving this award in past years. It is anticipated that the review panel for scoring proposals in this award process will be dependent on Math and Science Specialist at Centers. The Authority will continue to organize the central initial professional development retreat in Little Rock for the new STUART awardees.

TIMELINE
Year 1. The planning and training components with ARCF headquarters staff and regional Math/Science Resource Center staff will be completed during year one. This will include working with ARCF to derive funding formulas for Affiliates, defining school districts within their Affiliates' zones, determining which Math Science Center Affiliates are related to based on geographic areas, and central record keeping and forwarding of Affiliate annual reports to WRF. The Authority will handle all financial aspects of awards during year one. Affiliates will be sequentially introduced to the program. During this first year it is anticipated that Affiliates will only help solicit proposals within their communities and handle presentation of award checks in their service zone.

The Authority will also work with each of the Regional Math/Science Resource Centers to make sure staff are fully trained for both the Minigrants and STUART programs. Starting in year one, after receiving an

orientation workshop, Resource Center staff will help with evaluation of all applications. In future years, the Resource Center Staff will act as a central receiving point, initial evaluator, and advisor/consultant during a two-tiered review with Affiliates. In future years, the Authority (with the assistance of the Resource Centers) will continue to administer the Minigrant programs in Affiliate zones that have not received training and for school districts located outside administration jurisdiction of ARCF Affiliates. In these zones, the Resource center will function as previously described but the Authority will substitute for the Affiliate role.

The Authority will also participate in the orientation session hosted by WRF for Affiliates that will include information about how the rollout of the ARCF Science Minigrant Program will unfold.

Year 2. All Affiliates, which lie within initially four designated Math/Science Resource Center regions, will receive training concerning their specific responsibilities within the minigrant programs through a series of workshops and site visits. This training will insure successful administration of the various components of the Minigrant program at the community level. The Affiliates making up this initial group will be determined through a joint agreement between the Authority, the Math/Science Resource Centers, and ARCF. The workshop will entail a 1-2 day meeting held at the Resource Center, which is central to the Affiliate zones. Authority staff will travel to this locale to work with Affiliates in small groups. Affiliates will learn about record keeping, award presentation, reporting requirements and will actively participate in the second-tier evaluation of the applications for the Affiliate zones involved under the guidance and assistance of the Science Specialist at the Resource Center. The management of checks for award recipients in Affiliate zones will be handled by the central office of ARCF and will involve direct mail to school districts of award recipients.

The Authority will administer the minigrant program for schools falling outside administrative jurisdiction of ARCF Affiliates with the assistance of the Resource Centers. The Authority will also administer the STUART program with the assistance of the Resource Centers. Similarly, this policy will continue during years 3-5 for administration of Minigrants in non-Affiliate counties and for the STUART program.

Year 3. Additional Affiliates in four additional geographic regions will be trained through a series of workshops and site visits in order to insure successful administration of the various components of the Minigrants program at the community level. The Authority will serve in an advisory capacity to the original Affiliates that initially completed training the previous year. The untrained Affiliates will continue to help recruit proposal submissions and handle award checks in their service zone with the Authority handling the applications and evaluation process with the assistance of the Resource Centers.
Year 4. The final Affiliates will be trained through a series of workshops and site visits in order to insure successful administration of the various components of the Minigrant program at the community level. The Authority will serve in an advisory capacity to the previously trained Affiliates. The Authority will continue to administer the Minigrant programs and STUART program with the assistance of the Resource Centers for those school districts falling outside administration jurisdiction of ARCF Affiliates.

Year 5. The Authority will serve in an advisory capacity to the 25 (or more) Affiliates previously trained. The Authority will continue to administer the Minigrant programs with the assistance of the Resource Centers for those school districts falling outside administration jurisdiction of ARCF Affiliates. The Authority will also cooperate with Affiliates, ARCF, and the Math/Science Resource Centers at the beginning of this final year to evaluate and recommend any needed changes in the organization of the minigrants program or the STUART program.

Population served by proposal. Based on the Arkansas Department of Education (http://www. As-is.org), the "2003-04 Census of Enrollment by School District" indicates that the total number of public school students was 452,037 in 358 (now consolidated to 254) school districts. If one assumes that roughly a third of which would be 5th, 6th, 7th or 8th graders, then 150,679 public school students would be eligible to receive the "hands-on" activities and could be served by this program. Of course not all middle schools teachers apply,

but it is anticipated that with the transition to community-based administration and the involvement of Math/Science Resources Centers, the number of applications will increase significantly. This anticipated increase in applications will insure that more children in the state will be served by this program.

Goals and expectations.
The overall goals of the Science Minigrant and the STUART program are to:

- Improve middle school science instruction,
- Increase interest levels of children and young adults,
- Promote the continuation science education at the high school level.

The overall objective of this renewal is to facilitate local community support of inquiry-based instruction and utilization of interactive technology in the middle school classroom with the strategy that students who enjoy science at the middle school level will learn more and pursue continued learning in higher-level science coursework.

The **specific aims** will be to:

1) **Promote inquiry-based learning and interactive technology use in science middle school classrooms through interaction with Math/Science Resource Centers and local community Affiliate organizations.**
2) **Establish a sustainable community-based administrative system for the Minigrants and STUART programs to support inquiry-based science instruction in local school systems.**
3) **Train local community groups in the management of a competitive award system for educational improvement, i.e. the Minigrant and STUART program, which could be expanded for other future initiatives.**

Intellectual property. WRF will retain intellectual property rights to all activities generated by the Minigrants. These new materials and any previously developed materials under the 2002 grant will serve as the base for future work which will develop an on-line database of one-concept science lesson plans that all Arkansas teachers can access on-line. This database will also be cross-referenced to the Arkansas framework to facilitate the teacher's search for relevant activities.

Evaluation or measurement of program impact on students. Although it is hoped that performance would increase on national standardized test such as the IOWA tests which will be administered starting this year, it is beyond the ability (physically and legally) to assess any trends in school receiving these awards. However, a valuable **assessment will be the ability of the various Affiliates and regional Math/Science Centers to effectively manage this program.** Evaluation of both the effectiveness of the program and performance of Affiliate and Resource Centers will be made by an outside consultant/evaluator. All ARCF, Math/Science Resource Center Staff and Authority staff will work with the consultant/evaluator early in Year 1 to develop a performance matrix for evaluation of the program. This performance matrix will include measures of impact on: Affiliates, communities, teachers, Resource Centers, and students. The evaluator will review the program, observe classrooms which have been awarded minigrants and STUART grants, and will prepare an evaluation summary of success in promoting student enthusiasm through inquiry-based learning and interactive technology. This outside consultant will also evaluate the Authority performance, that of the Resource Centers, and of the Affiliates in administration of the program. This portion of the evaluation will focus on efficiency of the Authority in the transition of administration to the local level, and the competency of local community Affiliates and Math/Science Resource Centers in management of such programs. This outside consultant will submit an annual report to WRF.

Impact on the broader community. The use of local affiliates as a mechanism of improvement in science education will promote community pride and ownership in this program and in any successes that are

achieved. By using the Affiliates of Arkansas Community Foundation and the Math/Science Resource Centers a self-sustaining base is being developed which can impact Arkansas education not only in middle school science but in numerous educational disciplines that will lead to stronger students in mathematics, science, technology and engineering.

Specific indicators of change that will be tracked and how often. Indicators of change could be the spread of information regarding the minigrants program and increases in applications for this program. As Affiliates take over administration, the growth in the number of Affiliates and involvement in community education can also be evaluated. Finally, the use of the Math/Science Resource Centers would be expected to increase. The number of teachers visiting the Centers for resource assistance could be tracked as a marker of change. All three indicators could be assessed yearly following year one after the transition is initiated and using the baseline that exist during year one as a starting point.

Data collection system. Data from annual reports, applications, awards and performance indicators will be entered into the Authority database which is a secure system daily maintained and backed up by one designated Authority staff member.

Brief history of the Authority. The Arkansas Science & Technology Authority was created by statute in 1983. The Authority is comprised of a Board of Directors, Advisory Committees and staff. The 14-member Board is appointed by the Governor to staggered four-year terms. The Authority's staff is led by the President, the chief executive officer, who is responsible for the agency's programs, services and support functions. The Authority's activities are divided into three programmatic areas that include research, development and technology. The Board determines the allocation of funds to all projects supported by the Authority. All of the Authority's activities are audited annually to ensure compliance with state and federal guidelines. In its efforts to bring the benefits of science and technology to the people and state of Arkansas, the Authority has set high performance measures and objectives, one of which is to make university scientist, technologist, and engineers more nationally competitive for federal research funds. The Authority follows through by continually supporting entities like Arkansas Biosciences Institute, the Experimental Program to Stimulate Competitive Research (EPSCoR), Arkansas Manufacturing Solutions (AMS), and the Arkansas Department of Economic Development (ADED) with whom it collaborates in the R&D tax credit program. The Authority also supports larger-scale research projects and research infrastructure investments, by working through numerous board and committees that supports strategic research and research infrastructure projects that are relevant to the state’s economic growth.

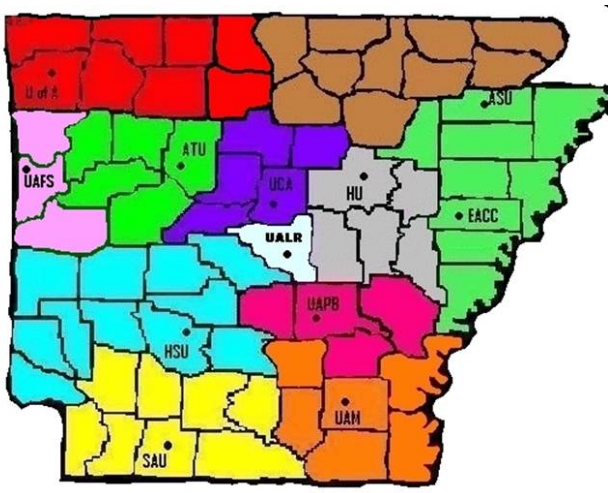
Arkansas Math and Science Coalition and Mathematics and Science Education Center History. The Arkansas Math, Science and Technology Coalition began in 1993 when Dr. William Durand, mathematics professor at Henderson State University, was named the executive director and received a $10,000 grant from the National Association of State Math and Science Coalitions (NASSMC) to organize a state coalition. Also in 1993, the National Science Foundation (NSF) awarded Arkansas a ten million dollar grant to begin the Statewide Systemic Initiative to improve mathematics and science education. Dr. Suzanne Mitchell, project director at the Arkansas Department of Higher Education, became the co-director of the coalition and began to connect math and science education needs to business and industry resources. The NSF grant provided the means to create math and science partnerships in five regions of the state and the Arkansas Math and Science Coalition was loosely organized around these business and education regional partnerships. By 2003, the five partnerships grew to twelve Centers for Mathematics and Science Education located at institutions of higher education.

In 2004, Sherry Lane was named the new executive director and Henderson State University was awarded a $20,000 grant from NASSMC to strengthen the coalition, to link science and math leaders to business and industry leaders and policy makers, to provide a communication vehicle to share information about math and science initiatives, and to find a means to sustain three NASA Explorer schools in Arkansas. The twelve

Mathematics and Science Education Centers have become financially sustainable entities with university support of staff and general operations, Arkansas Department of Education support of twelve mathematics specialist salaries, and grant support of salaries for the twelve science specialists. Centers help support their work with school districts through consultation fees for services.

INTERNAL	EXTERNAL
STRENGTHS	**OPPORTUNITIES**
1. Authority has extensive experience in administering this program	1. Chance to impact science education while incorporating a local management focus
2. Resource Centers have extensive knowledge of educational reform needs and understanding of the necessity for community involvement in education	2. Chance to enhance STEM programs that are successfully impacting students
WEAKNESSES	**THREATS**
1. Growth and sustainability of this program will require effort of all Affiliate members, with assistance of Math Science Resource Centers, to disseminate information	1. Community apathy
2. Large number of counties without Affiliate Partnership make future teacher funding less certain in these counties	2. Discouragement and diminished enthusiasm of some teachers when faced with overwhelming work load in communities with little support

Attachment 1



Regional Mathematics and Science Education Centers (Resource Centers) and the counties each serves:

Contact Name	Center Name	Center Mailing Address	Service Counties	Phone Number
Ms. Lynne Hehr	NASA Educator Resource Center	University of Arkansas 346 N. West Avenue Fayetteville, AR 72701	Benton, Carroll, Boone, Marion, Washington, Madison, Newton, Searcy	(479) 575-3875
Dr. Tim Martin	Math & Science Education Partnership	University of Arkansas - Fort Smith 5210 Grand Avenue, Box 3549 Fort Smith, AR 72913	Crawford, Sebastian, Scott	(479) 788-7965
Mr. Steve Zimmer	Math & Science Institute	Arkansas Tech University 1507 N. Boulder Avenue Russellville, AR 72801	Franklin, Johnson, Pope, Logan, Yell	(479) 964-0825
Ms. Sherry Lane	Math & Science Center	Henderson State University Box 7663 Arkadelphia, AR 71999-0001	Polk, Montgomery, Garland, Saline, Hot Spring, Dallas, Clark, Pike, Howard, Sevier, Little River	(870) 230-5417

Contact Name	Center Name	Center Mailing Address	Service Counties	Phone Number
Dr. Joe Winstead	Center for Teaching Excellence in Math & Science Education	Southern Arkansas University P.O. Box 9397 Magnolia, AR 71754	Hampstead, Miller, Lafayette, Columbia, Union, Calhoun, Ouachita, Nevada	(870) 235-4290
Dr. Pam Warrick Dr. Wendi Williams	Math & Science Partnership	University of Arkansas at Little Rock 2801 South University Ave. Little Rock, AR 72204	Pulaski	(501) 569-3418
Dr. Jim Edson Mr. Lowell Lynde	Center for Math & Science Education	University of Arkansas at Monticello 397 University Drive P.O. Box 3480 Monticello, AR 71656	Cleveland, Lincoln, Bradley, Drew, Ashley, Chicot	(870) 460-1966
Dr. Shelton Fitzpatrick	Center for Math/Science Education	University of Pine Bluff 1200 North University Mail Slot 4978 Pine Bluff, AR 71601	Grant, Jefferson, Arkansas, Lincoln	(870) 575-8051
Dr. Linda Griffith	Arkansas Center for Math & Science Education	University of Central Arkansas UCA Box 5103 201 Donaghey Avenue Conway, AR 72035-5005	Van Buren, Cleburne, Conway, Faulkner, Perry	(501) 450-5663
Dr. Sharron Oleson	NEA Delta Institute Math/Science	Arkansas State University P.O. Box 184 State University, AR 72467-0184	Jackson, Craighead, Mississippi, Poinsett, Cross, Crittenden, St. Francis, Lee, Phillips	(870) 972-3059
Ms. Jannie Trautwein	NEA Rural Institute Math & Science	Arkansas State University P.O. Box 3891 State University, AR 72467-2350	Baxter, Fulton, Randolph, Clay, Stone, Izard, Sharp, Lawrence, Greene, Independence	(870) 972-3059
Dr. Tony Finley	Center for Mathematics & Science	Harding University Box 12254 Searcy, AR 72149	White, Woodruff, Lonoke, Prairie, Monroe	(501) 279-4242

Additional Attachments

Strategic plan

List of your board members

Resumes of Dr. John Ahlen, President and Dr. Gail McClure, Vice President Research

Current organizational chart of the Authority

2004 Annual Report & Financial Report

Recent publications and news articles may be view at website: www.arkansasscienceandtechnology.org